Forest Insect & Disease Management

Survey Report

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LITTLE LEAF OF ASPEN
CHEQUAMEGON NATIONAL FOREST, WISCONSIN, 1975

Robert L. Anderson, Pathologist
Imants Millers, Entomologist
St. Paul Field Office

INTRODUCTION

For several years a problem known as little leaf of aspen was reported by the Park Falls Ranger District foresters. Characteristically, aspens had small leaves and sparse foliage for a year or two before death. Since these factors were present in campgrounds where aspen was one of the prime species of shade trees, the staff of the Chequamegon National Forest requested assistance in solving the problem.

OBJECTIVE

The objective of the survey was to identify the causal agent of little leaf of aspen and its associated mortality in recreation sites and campgrounds.

METHOD

The problem was most severe in the Newman Lake and Twin Lake campgrounds. The ground survey was conducted on August 18, 1975. Portions of trees affected including roots were examined for signs or symptoms of insect and disease activity.

RESULTS AND DISCUSSION

Ten trees were examined at the Newman Lake campground and vicinity. All of them showed stunted leaves, thin crowns and signs of dieback. Hypoxylon canker (Hypoxylon pruinatum), Fomes ignarius or mechanical injury was found on the trunk in the crown below the diseased portion of the crown on all of them.

Similar damage was found also at the Twin Lakes campground. However, in addition, ten trees were examined showing the disease symptoms but without obvious trunk damage. On eight trees we found decays on the large roots or on the root crown with typical symptoms of Armillaria mellea. The other two trees may have had the same symptoms further along the roots, but their location in the campground prevented us from further excavation.

No significant insect damage was found on the affected trees where damage could have been responsible for the symptoms. We concluded that H. pruinatum, F. ignarius, mechanical damage, and A. mellea are the causes for the stunted appearance of leaves, dieback and tree mortality. The stress exerted by high use of the campground, soil compaction, construction, sudden opening of the stand, and mechanical damage to the trees probably increased the frequency of successful A. mellea attacks. Many of the affected trees appeared to be the older trees or possibly, overmature ones.

RECOMMENDATIONS

1. Remove diseased trees when they become hazardous.

2. Thin when necessary to increase vigor or remaining trees.

3. Fertilize with 12-8-4 at the rate of 1/2 pound per diameter inch of tree in high use areas to increase vigor.

4. Select more durable tree species in the high use areas of the campground or recreation site. When necessary, replace and replant with selected species.